

## COMMONWEALTH OF MASSACHUSETTS | PUBLIC EMPLOYEE RETIREMENT ADMINISTRATION COMMISSION

PHILIP Y. BROWN, ESO., Chairman

IOHN W. PARSONS, ESO., Executive Director

Auditor SUZANNE M. BUMP | KATHLEEN M. FALLON | KATE FITZPATRICK | JAMES M. MACHADO | RICHARD MACKINNON, JR. | JENNIFER F. SULLIVAN

## MEMORANDUM

TO: Waltham Retirement Board

FROM: John W. Parsons, Esq., Executive Director

RE: Approval of Funding Schedule

DATE: November 23, 2021

This Commission is hereby furnishing you with approval of the revised funding schedule the Board recently adopted (copy enclosed). The schedule assumes payments are made on average on July 1 of each fiscal year. The schedule is effective in FY22 (since the amount under the prior schedule was maintained in FY22) and is acceptable under Chapter 32.

Although we are approving the schedule, we have serious concerns regarding the plan assumptions. The System maintained the 7.75% investment return assumption from 2019 in this valuation. In our 2019 approval we noted we had generally recommended an assumption between 7.0% and 7.25% at that time. We are recommending an assumption of 7.0% (or lower) for our 2021 actuarial valuations. For comparison, 34 systems are currently using an assumption of 7.0% or below. We expect this to increase to about 40 when all the 2021 valuations are completed. There are 74 systems using an assumption of 7.25% or below.

Our reasonable range for our 2021 valuations is 6.0% to 7.45%. Note that your assumption is significantly greater than the high end of our reasonable range. This means that if we were the actuary for the plan, we would not allow that assumption and would request you find another actuary if the Board insisted on using it. If we were to complete the work using that assumption, we would provide extensive detail as to what the plan liabilities would be using our recommended assumptions. We expect the plan's actuarial liability would increase about 10% (\$47 million) using our recommended assumptions.

We also note that although you use a current mortality assumption, mortality improvement is only projected to 2025. PERAC's mortality assumption does not limit the length of mortality improvements to a specific year. PERAC's methodology is common practice based on our experience. Note that there was a mortality loss of approximately \$8 million in this valuation.

We are available to discuss these issues further. If you have any questions, please contact PERAC's Actuary, John Boorack, at (617) 666-4446, extension 935.

## JWP/1tt

P:\actuaria\APPROP\Approp22\waltham approval.docx

Enc.





https://shermanactuary-my.sherepoint.com/personal/dan\_shermanactuary\_com/Documents/Recovered Dain/Waltham/Val21/[Waltham\_Val21 option C.xlsm]Approp. Results

## **Appropriation Forecast**

Year   Employee   Normal Cost   Payments   Total Cost   Total Cost   Unfinded   Funded     Ending   Contribution   with Interest   xin Reliance   1.5   2020   \$1,800,806   31.2   \$176,933,904   64.0   66.7     2024   6,577,206   1,909,587   20,358,681   22,268,268   31.2   170,244,914   66.7     2025   6,879,989   1,901,082   21,725,550   23,626,632   32.0   162,305,388   69.5     2026   7,195,909   1,889,643   23,201,840   25,091,483   32.8   152,332,348   72.6     2028   7,869,380   1,857,170   26,442,109   28,29,279   34.6   125,194,063   79.4     2029   8,228,096   1,835,717   28,218,117   30,053,834   35.5   16,488,109   86.9     2031   8,992,581   1,781,241	Fiscal		Employer	Amortization	Employer	Employer		
2022   \$6,008,966   \$1,918,525   \$17,881,475   \$19,800,000   29.7   \$180,957,824   61.5     2023   6,287,034   1,915,342   19,072,658   20,988,000   30.5   176,393,904   64.0     2024   6,577,206   1,909,587   20,358,681   22,268,268   31.2   170,244,314   66.7     2025   6,879,989   1,901,082   21,725,550   23,626,632   32.0   162,305,388   69.5     2026   7,195,909   1,889,643   23,201,840   25,991,483   32.8   152,332,348   72.6     2027   7,525,516   1,875,074   24,772,081   26,647,155   33.7   140,053,969   75.9     2028   7,869,380   1,8857,170   26,442,109   28,299,279   34.6   125,194,063   79.4     2029   8,228,096   1,835,717   28,218,117   30,053,834   35.5   107,448,980   83.0     2031   8,992,581   1,781,241   32,243,714   34,024,955   37.5   61,870,442   91.1     20	Year	Employee	Normal Cost	Payments	Total Cost	Total Cost	Unfunded	Funded
2023   6,287,034   1,915,342   19,072,658   20,988,000   30.5   176,393,904   64.0     2024   6,577,206   1,909,587   20,358,681   22,268,268   31.2   170,244,314   66.7     2025   6,879,989   1,901,082   21,725,550   23,626,632   32.0   162,305,388   69.5     2026   7,195,909   1,889,643   23,201,840   25,091,483   32.8   152,332,348   72.6     2027   7,525,516   1,875,074   24,772,081   26,647,155   33.7   140,053,969   75.9     2028   7,869,380   1,835,717   26,442,109   28,299,279   34.6   125,194,063   79.4     2029   8,228,096   1,835,717   28,218,117   30,053,834   35.5   107,448,980   83.0     2031   8,992,581   1,781,241   32,243,714   34,024,955   37.5   61,870,442   91.1     2032   9,399,664   1,747,730   34,457,884   36,205,614   38.6   33,195,557   95.4     2033	Ending	Contribution	with Interest	with Interest	with Interest	% of Payroll	Liability**	Ratio %**
2024   6,577,206   1,909,587   20,358,681   22,268,268   31.2   170,244,314   66.7     2025   6,879,989   1,901,082   21,725,550   23,626,632   32.0   162,305,388   69.5     2026   7,195,909   1,889,643   23,201,840   25,091,483   32.8   152,332,348   72.6     2027   7,525,516   1,875,074   24,772,081   26,647,155   33.7   140,053,969   75.9     2028   7,869,380   1,857,170   28,218,117   30,053,834   35.5   107,448,980   83.0     2030   8,602,281   1,810,486   30,169,990   31,980,476   36.5   86,485,109   86.9     2031   8,992,581   1,781,241   32,243,714   34,024,955   37.5   61,870,442   91.1     2032   9,399,664   1,747,730   34,457,884   36,205,614   38.6   33,195,557   95.4     2033   9,824,226   1,709,692   0   1,666,850   1.7   (0)   100.0     2034   10,266	2022	\$6,008,966	\$1,918,525	\$17,881,475	\$19,800,000	29.7	\$180,957,824	61.5
2025   6,879,989   1,901,082   21,725,550   23,626,632   32.0   162,305,388   69.5     2026   7,195,909   1,889,643   23,201,840   25,091,483   32.8   152,332,348   72.6     2027   7,525,516   1,875,074   24,772,081   26,647,155   33.7   140,053,969   75.9     2028   7,869,380   1,857,170   26,442,109   28,299,279   34.6   125,194,063   79.4     2029   8,228,096   1,835,717   28,218,117   30,053,834   35.5   107,448,980   83.0     2031   8,992,581   1,781,241   32,243,714   34,024,955   37.5   61,870,442   91.1     2032   9,399,664   1,747,730   34,457,884   36,205,614   38.6   33,195,557   95.4     2033   9,824,226   1,709,692   0   1,709,692   1.8   (0)   100.0     2035   10,728,720   1,618,915   0   1,618,915   1.6   (0)   100.0     2036   11,210,190	2023	6,287,034	1,915,342	19,072,658	20,988,000	30.5	176,393,904	64.0
2026   7,195,909   1,889,643   23,201,840   25,091,483   32.8   152,332,348   72.6     2027   7,525,516   1,875,074   24,772,081   26,647,155   33.7   140,053,969   75.9     2028   7,869,380   1,857,170   26,442,109   28,299,279   34.6   125,194,063   79.4     2029   8,228,096   1,835,717   28,218,117   30,053,834   35.5   107,448,980   83.0     2031   8,992,581   1,781,241   32,243,714   34,024,955   37.5   61,870,442   91.1     2032   9,399,664   1,747,730   34,457,884   36,205,614   38.6   33,195,557   95.4     2033   9,824,226   1,709,692   0   1,709,692   1.8   (0)   100.0     2034   10,266,994   1,666,850   0   1,618,915   0   1,618,915   0   1,618,915   0   1,018,915   0   1,019,19   1,000,00   0     2037   11,712,221   1,506,534   0   1,506,534	2024	6,577,206	1,909,587	20,358,681	22,268,268	31.2	170,244,314	66.7
2027   7,525,516   1,875,074   24,772,081   26,647,155   33.7   140,053,969   75.9     2028   7,869,380   1,857,170   26,442,109   28,299,279   34.6   125,194,063   79.4     2029   8,228,096   1,835,717   28,218,117   30,053,834   35.5   107,448,980   83.0     2030   8,602,281   1,810,486   30,169,990   31,980,476   36.5   86,485,109   86.9     2031   8,992,581   1,781,241   32,243,714   34,024,955   37.5   61,870,442   91.1     2032   9,399,664   1,747,730   34,457,884   36,205,614   38.6   33,195,557   95.4     2033   9,824,226   1,709,692   0   1,709,692   1.8   (0)   100.0     2034   10,266,994   1,666,850   0   1,668,850   1.7   (0)   100.0     2035   11,712,221   1,506,534   0   1,565,583   1.5   (0)   100.0     2037   12,746,424   1,613,837 <td>2025</td> <td>6,879,989</td> <td>1,901,082</td> <td>21,725,550</td> <td>23,626,632</td> <td>32.0</td> <td>162,305,388</td> <td>69.5</td>	2025	6,879,989	1,901,082	21,725,550	23,626,632	32.0	162,305,388	69.5
2028   7,869,380   1,857,170   26,442,109   28,299,279   34,6   125,194,063   79,4     2029   8,228,096   1,835,717   28,218,117   30,053,834   35.5   107,448,980   83.0     2030   8,602,281   1,810,486   30,169,990   31,980,476   36.5   86,485,109   86.9     2031   8,992,581   1,781,241   32,243,714   34,024,955   37.5   61,870,442   91.1     2032   9,399,664   1,747,730   34,457,884   36,205,614   38.6   33,195,557   95.4     2033   9,824,226   1,709,692   0   1,709,692   1.8   (0)   100.0     2034   10,266,994   1,666,850   0   1,618,915   1.6   (0)   100.0     2035   10,728,720   1,618,915   0   1,518,915   1.6   (0)   100.0     2037   11,712,221   1,506,534   0   1,506,534   1.4   (0)   100.0     2039   12,546,424   1,613,837   0<	2026	7,195,909	1,889,643	23,201,840	25,091,483	32.8	152,332,348	72.6
2029   8,228,096   1,835,717   28,218,117   30,053,834   35.5   107,448,980   83.0     2030   8,602,281   1,810,486   30,169,990   31,980,476   36.5   86,485,109   86.9     2031   8,992,581   1,781,241   32,243,714   34,024,955   37.5   61,870,442   91.1     2032   9,399,664   1,747,730   34,457,884   36,205,614   38.6   33,195,557   95.4     2033   9,824,226   1,709,692   0   1,709,692   1.8   (0)   100.0     2034   10,266,994   1,666,850   0   1,666,850   1.7   (0)   100.0     2035   10,728,720   1,618,915   0   1,618,915   1.6   (0)   100.0     2036   11,210,190   1,565,583   0   1,565,583   1.5   (0)   100.0     2037   11,712,221   1,506,534   0   1,556,583   1.4   (0)   100.0     2038   12,122,148   1,559,262   0	2027	7,525,516	1,875,074	24,772,081	26,647,155	33.7	140,053,969	75.9
2030   8,602,281   1,810,486   30,169,990   31,980,476   36.5   86,485,109   86.9     2031   8,992,581   1,781,241   32,243,714   34,024,955   37.5   61,870,442   91.1     2032   9,399,664   1,747,730   34,457,884   36,205,614   38.6   33,195,557   95.4     2033   9,824,226   1,709,692   0   1,709,692   1.8   (0)   100.0     2034   10,266,994   1,666,850   0   1,666,850   1.7   (0)   100.0     2035   10,728,720   1,618,915   0   1,618,915   1.6   (0)   100.0     2036   11,210,190   1,565,583   0   1,565,583   1.5   (0)   100.0     2037   11,712,221   1,506,534   0   1,506,534   1.4   (0)   100.0     2038   12,122,148   1,559,262   0   1,559,262   1.4   (0)   100.0     2039   12,546,424   1,613,837   0   1,613,837	2028	7,869,380	1,857,170	26,442,109	28,299,279	34.6	125,194,063	79.4
2031   8,992,581   1,781,241   32,243,714   34,024,955   37.5   61,870,442   91.1     2032   9,399,664   1,747,730   34,457,884   36,205,614   38.6   33,195,557   95.4     2033   9,824,226   1,709,692   0   1,709,692   1.8   (0)   100.0     2034   10,266,994   1,666,850   0   1,666,850   1.7   (0)   100.0     2035   10,728,720   1,618,915   0   1,618,915   1.6   (0)   100.0     2036   11,210,190   1,565,583   0   1,565,583   1.5   (0)   100.0     2037   11,712,221   1,506,534   0   1,506,534   1.4   (0)   100.0     2038   12,122,148   1,559,262   0   1,559,262   1.4   (0)   100.0     2039   12,546,424   1,613,837   0   1,613,837   1.4   0   100.0     2040   12,985,549   1,670,321   0   1,670,321   1.4	2029	8,228,096	1,835,717	28,218,117	30,053,834	35.5	107,448,980	83.0
2032   9,399,664   1,747,730   34,457,884   36,205,614   38.6   33,195,557   95.4     2033   9,824,226   1,709,692   0   1,709,692   1.8   (0)   100.0     2034   10,266,994   1,666,850   0   1,666,850   1.7   (0)   100.0     2035   10,728,720   1,618,915   0   1,618,915   1.6   (0)   100.0     2036   11,210,190   1,565,583   0   1,565,583   1.5   (0)   100.0     2037   11,712,221   1,506,534   0   1,506,534   1.4   (0)   100.0     2038   12,122,148   1,559,262   0   1,559,262   1.4   (0)   100.0     2039   12,546,424   1,613,837   0   1,670,321   1.4   0   100.0     2041   13,440,043   1,728,782   0   1,728,782   1.4   0   100.0     2042   13,910,444   1,789,289   0   1,789,289   1.4   0 <td>2030</td> <td>8,602,281</td> <td>1,810,486</td> <td>30,169,990</td> <td>31,980,476</td> <td>36.5</td> <td>86,485,109</td> <td>86.9</td>	2030	8,602,281	1,810,486	30,169,990	31,980,476	36.5	86,485,109	86.9
2033   9,824,226   1,709,692   0   1,709,692   1.8   (0)   100.0     2034   10,266,994   1,666,850   0   1,666,850   1.7   (0)   100.0     2035   10,728,720   1,618,915   0   1,618,915   1.6   (0)   100.0     2036   11,210,190   1,565,583   0   1,565,583   1.5   (0)   100.0     2037   11,712,221   1,506,534   0   1,506,534   1.4   (0)   100.0     2038   12,122,148   1,559,262   0   1,559,262   1.4   (0)   100.0     2039   12,546,424   1,613,837   0   1,670,321   1.4   0   100.0     2040   12,985,549   1,670,321   0   1,670,321   1.4   0   100.0     2041   13,440,043   1,728,782   0   1,728,782   1.4   0   100.0     2042   13,910,444   1,789,289   0   1,789,289   1.4   0   100.	2031	8,992,581	1,781,241	32,243,714	34,024,955	37.5	61,870,442	91.1
2034   10,266,994   1,666,850   0   1,666,850   1.7   (0)   100.0     2035   10,728,720   1,618,915   0   1,618,915   1.6   (0)   100.0     2036   11,210,190   1,565,583   0   1,565,583   1.5   (0)   100.0     2037   11,712,221   1,506,534   0   1,506,534   1.4   (0)   100.0     2038   12,122,148   1,559,262   0   1,559,262   1.4   (0)   100.0     2039   12,546,424   1,613,837   0   1,613,837   1.4   0   100.0     2040   12,985,549   1,670,321   0   1,670,321   1.4   0   100.0     2041   13,440,043   1,728,782   0   1,728,782   1.4   0   100.0     2042   13,910,444   1,789,289   0   1,789,289   1.4   0   100.0     2043   14,397,310   1,851,915   0   1,851,915   1.4   0   100.0	2032	9,399,664	1,747,730	34,457,884	36,205,614	38.6	33,195,557	95.4
2035   10,728,720   1,618,915   0   1,618,915   1.6   (0)   100.0     2036   11,210,190   1,565,583   0   1,565,583   1.5   (0)   100.0     2037   11,712,221   1,506,534   0   1,506,534   1.4   (0)   100.0     2038   12,122,148   1,559,262   0   1,559,262   1.4   0   100.0     2039   12,546,424   1,613,837   0   1,613,837   1.4   0   100.0     2040   12,985,549   1,670,321   0   1,670,321   1.4   0   100.0     2041   13,440,043   1,728,782   0   1,789,289   1.4   0   100.0     2042   13,910,444   1,789,289   0   1,789,289   1.4   0   100.0     2043   14,397,310   1,851,915   0   1,851,915   1.4   0   100.0     2044   14,901,216   1,916,732   0   1,916,732   1.4   0   100.0 <td>2033</td> <td>9,824,226</td> <td>1,709,692</td> <td>0</td> <td>1,709,692</td> <td>1.8</td> <td>(0)</td> <td>100.0</td>	2033	9,824,226	1,709,692	0	1,709,692	1.8	(0)	100.0
2036   11,210,190   1,565,583   0   1,565,583   1.5   (0)   100.0     2037   11,712,221   1,506,534   0   1,506,534   1.4   (0)   100.0     2038   12,122,148   1,559,262   0   1,559,262   1.4   (0)   100.0     2039   12,546,424   1,613,837   0   1,613,837   1.4   0   100.0     2040   12,985,549   1,670,321   0   1,670,321   1.4   0   100.0     2041   13,440,043   1,728,782   0   1,728,782   1.4   0   100.0     2042   13,910,444   1,789,289   0   1,789,289   1.4   0   100.0     2043   14,397,310   1,851,915   0   1,851,915   1.4   0   100.0     2044   14,901,216   1,916,732   0   1,916,732   1.4   0   100.0     2045   15,422,758   1,983,817   0   1,983,817   1.4   0   100.0 <td>2034</td> <td>10,266,994</td> <td>1,666,850</td> <td>0</td> <td>1,666,850</td> <td>1.7</td> <td>(0)</td> <td>100.0</td>	2034	10,266,994	1,666,850	0	1,666,850	1.7	(0)	100.0
2037 11,712,221 1,506,534 0 1,506,534 1.4 (0) 100.0   2038 12,122,148 1,559,262 0 1,559,262 1.4 (0) 100.0   2039 12,546,424 1,613,837 0 1,613,837 1.4 0 100.0   2040 12,985,549 1,670,321 0 1,670,321 1.4 0 100.0   2041 13,440,043 1,728,782 0 1,728,782 1.4 0 100.0   2042 13,910,444 1,789,289 0 1,789,289 1.4 0 100.0   2043 14,397,310 1,851,915 0 1,851,915 1.4 0 100.0   2044 14,901,216 1,916,732 0 1,916,732 1.4 0 100.0   2045 15,422,758 1,983,817 0 1,983,817 1.4 0 100.0   2046 15,962,555 2,053,251 0 2,053,251 1.4 0 100.0   2047 16,521,244 2,125,115 0 2,125,115 1.4	2035	10,728,720	1,618,915	0	1,618,915	1.6	(0)	100.0
2038   12,122,148   1,559,262   0   1,559,262   1.4   (0)   100.0     2039   12,546,424   1,613,837   0   1,613,837   1.4   0   100.0     2040   12,985,549   1,670,321   0   1,670,321   1.4   0   100.0     2041   13,440,043   1,728,782   0   1,728,782   1.4   0   100.0     2042   13,910,444   1,789,289   0   1,789,289   1.4   0   100.0     2043   14,397,310   1,851,915   0   1,851,915   1.4   0   100.0     2044   14,901,216   1,916,732   0   1,916,732   1.4   0   100.0     2045   15,422,758   1,983,817   0   1,983,817   1.4   0   100.0     2046   15,962,555   2,053,251   0   2,053,251   1.4   0   100.0     2047   16,521,244   2,125,115   0   2,125,115   1.4   0   100.0	2036	11,210,190	1,565,583	0	1,565,583	1.5	(0)	100.0
2039 12,546,424 1,613,837 0 1,613,837 1.4 0 100.0   2040 12,985,549 1,670,321 0 1,670,321 1.4 0 100.0   2041 13,440,043 1,728,782 0 1,728,782 1.4 0 100.0   2042 13,910,444 1,789,289 0 1,789,289 1.4 0 100.0   2043 14,397,310 1,851,915 0 1,851,915 1.4 0 100.0   2044 14,901,216 1,916,732 0 1,916,732 1.4 0 100.0   2045 15,422,758 1,983,817 0 1,983,817 1.4 0 100.0   2046 15,962,555 2,053,251 0 2,053,251 1.4 0 100.0   2047 16,521,244 2,125,115 0 2,125,115 1.4 0 100.0   2048 17,099,488 2,199,494 0 2,199,494 1.4 0 100.0   2050 18,317,399 2,356,152 0 2,356,152 1.4	2037	11,712,221	1,506,534	0	1,506,534	1.4	(0)	100.0
2040 12,985,549 1,670,321 0 1,670,321 1.4 0 100.0   2041 13,440,043 1,728,782 0 1,728,782 1.4 0 100.0   2042 13,910,444 1,789,289 0 1,789,289 1.4 0 100.0   2043 14,397,310 1,851,915 0 1,851,915 1.4 0 100.0   2044 14,901,216 1,916,732 0 1,916,732 1.4 0 100.0   2045 15,422,758 1,983,817 0 1,983,817 1.4 0 100.0   2046 15,962,555 2,053,251 0 2,053,251 1.4 0 100.0   2047 16,521,244 2,125,115 0 2,125,115 1.4 0 100.0   2048 17,099,488 2,199,494 0 2,199,494 1.4 0 100.0   2050 18,317,399 2,356,152 0 2,356,152 1.4 0 100.0   2051 18,958,508 2,438,618 0 2,438,618 1.4	2038	12,122,148	1,559,262	0	1,559,262	1.4	(0)	100.0
2041 13,440,043 1,728,782 0 1,728,782 1.4 0 100.0   2042 13,910,444 1,789,289 0 1,789,289 1.4 0 100.0   2043 14,397,310 1,851,915 0 1,851,915 1.4 0 100.0   2044 14,901,216 1,916,732 0 1,916,732 1.4 0 100.0   2045 15,422,758 1,983,817 0 1,983,817 1.4 0 100.0   2046 15,962,555 2,053,251 0 2,053,251 1.4 0 100.0   2047 16,521,244 2,125,115 0 2,125,115 1.4 0 100.0   2048 17,099,488 2,199,494 0 2,199,494 1.4 0 100.0   2049 17,697,970 2,276,476 0 2,276,476 1.4 0 100.0   2050 18,317,399 2,356,152 0 2,356,152 1.4 0 100.0   2051 18,958,508 2,438,618 0 2,438,618 1.4	2039	12,546,424	1,613,837	0	1,613,837	1.4	0	100.0
2042 13,910,444 1,789,289 0 1,789,289 1.4 0 100.0   2043 14,397,310 1,851,915 0 1,851,915 1.4 0 100.0   2044 14,901,216 1,916,732 0 1,916,732 1.4 0 100.0   2045 15,422,758 1,983,817 0 1,983,817 1.4 0 100.0   2046 15,962,555 2,053,251 0 2,053,251 1.4 0 100.0   2047 16,521,244 2,125,115 0 2,125,115 1.4 0 100.0   2048 17,099,488 2,199,494 0 2,199,494 1.4 0 100.0   2049 17,697,970 2,276,476 0 2,276,476 1.4 0 100.0   2050 18,317,399 2,356,152 0 2,356,152 1.4 0 100.0   2051 18,958,508 2,438,618 0 2,438,618 1.4 0 100.0   2052 19,622,055 2,523,969 0 2,523,969 1.4	2040	12,985,549	1,670,321	0	1,670,321	1.4	0	100.0
2043 14,397,310 1,851,915 0 1,851,915 1.4 0 100.0   2044 14,901,216 1,916,732 0 1,916,732 1.4 0 100.0   2045 15,422,758 1,983,817 0 1,983,817 1.4 0 100.0   2046 15,962,555 2,053,251 0 2,053,251 1.4 0 100.0   2047 16,521,244 2,125,115 0 2,125,115 1.4 0 100.0   2048 17,099,488 2,199,494 0 2,199,494 1.4 0 100.0   2049 17,697,970 2,276,476 0 2,276,476 1.4 0 100.0   2050 18,317,399 2,356,152 0 2,356,152 1.4 0 100.0   2051 18,958,508 2,438,618 0 2,438,618 1.4 0 100.0   2052 19,622,055 2,523,969 0 2,523,969 1.4 0 100.0	2041	13,440,043	1,728,782	0	1,728,782	1.4	0	100.0
2044 14,901,216 1,916,732 0 1,916,732 1.4 0 100.0   2045 15,422,758 1,983,817 0 1,983,817 1.4 0 100.0   2046 15,962,555 2,053,251 0 2,053,251 1.4 0 100.0   2047 16,521,244 2,125,115 0 2,125,115 1.4 0 100.0   2048 17,099,488 2,199,494 0 2,199,494 1.4 0 100.0   2049 17,697,970 2,276,476 0 2,276,476 1.4 0 100.0   2050 18,317,399 2,356,152 0 2,356,152 1.4 0 100.0   2051 18,958,508 2,438,618 0 2,438,618 1.4 0 100.0   2052 19,622,055 2,523,969 0 2,523,969 1.4 0 100.0	2042	13,910,444	1,789,289	0	1,789,289	1.4	0	100.0
2045 15,422,758 1,983,817 0 1,983,817 1.4 0 100.0   2046 15,962,555 2,053,251 0 2,053,251 1.4 0 100.0   2047 16,521,244 2,125,115 0 2,125,115 1.4 0 100.0   2048 17,099,488 2,199,494 0 2,199,494 1.4 0 100.0   2049 17,697,970 2,276,476 0 2,276,476 1.4 0 100.0   2050 18,317,399 2,356,152 0 2,356,152 1.4 0 100.0   2051 18,958,508 2,438,618 0 2,438,618 1.4 0 100.0   2052 19,622,055 2,523,969 0 2,523,969 1.4 0 100.0	2043	14,397,310	1,851,915	0	1,851,915	1.4	0	100.0
2046 15,962,555 2,053,251 0 2,053,251 1.4 0 100.0   2047 16,521,244 2,125,115 0 2,125,115 1.4 0 100.0   2048 17,099,488 2,199,494 0 2,199,494 1.4 0 100.0   2049 17,697,970 2,276,476 0 2,276,476 1.4 0 100.0   2050 18,317,399 2,356,152 0 2,356,152 1.4 0 100.0   2051 18,958,508 2,438,618 0 2,438,618 1.4 0 100.0   2052 19,622,055 2,523,969 0 2,523,969 1.4 0 100.0	2044	14,901,216	1,916,732	0	1,916,732	1.4	0	100.0
2047 16,521,244 2,125,115 0 2,125,115 1.4 0 100.0   2048 17,099,488 2,199,494 0 2,199,494 1.4 0 100.0   2049 17,697,970 2,276,476 0 2,276,476 1.4 0 100.0   2050 18,317,399 2,356,152 0 2,356,152 1.4 0 100.0   2051 18,958,508 2,438,618 0 2,438,618 1.4 0 100.0   2052 19,622,055 2,523,969 0 2,523,969 1.4 0 100.0	2045	15,422,758	1,983,817	0	1,983,817	1.4	0 .	100.0
2048 17,099,488 2,199,494 0 2,199,494 1.4 0 100.0   2049 17,697,970 2,276,476 0 2,276,476 1.4 0 100.0   2050 18,317,399 2,356,152 0 2,356,152 1.4 0 100.0   2051 18,958,508 2,438,618 0 2,438,618 1.4 0 100.0   2052 19,622,055 2,523,969 0 2,523,969 1.4 0 100.0	2046	15,962,555	2,053,251	0	2,053,251	1.4	0	100.0
2049 17,697,970 2,276,476 0 2,276,476 1.4 0 100.0   2050 18,317,399 2,356,152 0 2,356,152 1.4 0 100.0   2051 18,958,508 2,438,618 0 2,438,618 1.4 0 100.0   2052 19,622,055 2,523,969 0 2,523,969 1.4 0 100.0	2047	16,521,244	2,125,115	,0	2,125,115	1.4	0	100.0
2050 18,317,399 2,356,152 0 2,356,152 1.4 0 100.0   2051 18,958,508 2,438,618 0 2,438,618 1.4 0 100.0   2052 19,622,055 2,523,969 0 2,523,969 1.4 0 100.0	2048	17,099,488	2,199,494	0	2,199,494	1.4	0	100.0
2051 18,958,508 2,438,618 0 2,438,618 1.4 0 100.0   2052 19,622,055 2,523,969 0 2,523,969 1.4 0 100.0	2049	17,697,970	2,276,476	0	2,276,476	1.4	0	100.0
2052 19,622,055 2,523,969 0 2,523,969 1.4 0 100.0	2050	18,317,399	2,356,152	0	2,356,152	1.4	0	100.0
	2051	18,958,508	2,438,618	0	2,438,618	1.4	0	100.0
2053 20,308,827 2,612,308 0 2,612,308 1.4 0 100.0	2052	19,622,055	2,523,969	0	2,523,969	1.4	0	100.0
	2053	20,308,827	2,612,308	0	2,612,308	1.4	0	100.0

<sup>\*\*</sup> Beginning of Fiscal Year